

## 5. Facundo

**Program Name: Facundo.java**

**Input File: facundo.dat**

Facundo needs a program that will emulate what in his eyes is a perfect shuffle. Your job is to create this program.

The deck of cards will be represented by a string of uppercase letters. The first letter in the string is the top of the deck.

First, the deck will be split into an upper deck and a lower deck. The upper deck will consist of the half of the deck containing the top card. The top card will be the top card of the upper deck. The lower deck will consist of the rest of the cards with the bottom card of the original deck being the bottom card on the lower deck.

If there is an even number of cards, the upper and lower decks will have the same number of cards. If there is an odd number of cards, the upper deck will have one more card than the lower deck.

Then, the decks will be shuffled. The bottom card of the upper deck always goes first to the bottom position in the shuffled deck. The bottom card of the lower deck will go on top of that card. The upper and lower decks continue to alternate being placed on the stack until there are no more cards.

This process is executed as many times as is indicated by the data. For ABCDEFG 3, the cards are shuffled three times.

**Input:** The first line consists of a number N, representing the number of lines of data to follow. N will be in the range of [1,50]. The next N lines of data will consist of a string of uppercase letters followed by an integer in the range of [0,100]. The string will be of length in the range of [2,26].

**Output:** Each output will be a string of uppercase letters.

**Sample input:**

```
8
ABCDEFG 0
ABCDEFG 1
ABCDEFG 2
ABCDEFG 3
ABCDEFGHIJ 0
ABCDEFGHIJ 1
ABCDEFGHIJ 2
ABCDEFGHIJ 3
```

**Sample output:**

```
ABCDEFG
AEBFCGD
ACEGBDF
ABCDEFG
ABCDEFGHIJ
FAGBHCIDJE
CFIADGJBEH
GCJFBIEAHD
```